

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A method for manufacturing multimaterial parts, wherein the multimaterial ~~used in the method containing~~ contains a tough ferrous ~~(Fe > 50 wt. %)~~ material component (B), selected from ferrous-based materials having Fe > 50 wt.% and nickel-based materials having Ni > 50 wt.%, in a desired distribution with a wear-resistant hard; ~~wear-resistant~~ material component (A), comprising:

~~in which method~~ forming and densifying a green body ~~is prepared from the~~ tough material component (B) and the wear-resistant hard material component (A) ~~by a process comprising hot isostatic hot pressing into to form~~ a substantially densified green body; ~~wherein the green body is~~

~~hot~~ working the substantially densified green body ~~worked up to a hot working~~ degree of at least 2, wherein the working degree is determined from the cross-sectional areas of the body prior to and after hot working, thereby obtaining minimum ~~so as to obtain~~ a desired distribution between the tough material component (B) and the hard material component (A), thereby forming a hot worked multimaterial part ~~and the working degree is determined from the cross-sectional areas of the body prior to and after hot working.~~

2. (Currently Amended) The method of claim 1, wherein the wear-resistant hard material component (A) and the tough material component (B) may be in a either powderized, partially densified, or entirely solid state prior to said densifying ~~starting the densification of the green body.~~

3. (Currently Amended) The method of claim 1, wherein the wear-resistant hard material component (A) is a ferrous-based material having {Fe > 50 wt. %} or, alternatively, is a mixture of a ferrous-based material and a ceramic material (~~carbide, oxide, nitride, boride, etc.~~) containing not more than 30 wt. % of a metallic binder, and wherein ~~whereby~~ the hardness of the wear-resistant hard material component (A) is greater than HRC 35.

4. (Currently Amended) The method of claim 1, wherein ~~the tough material component (B) is a ferrous (Fe > 50 wt. %) or nickel (Ni > 50 wt. %) based material,~~ whereby the hardness of the tough material component (B) is not greater than HRC 35.

5. (Currently Amended) The method of claim 1, wherein prior to said densifying, the wear-resistant hard material component (A) is ~~prepared from~~ in a powderized raw material ~~in which the chemical composition of the state, and comprises (1) a ferrous metallic powder having a composition wherein {Fe > 50 wt. %} in the powderized mixture is and containing~~ 0.5-3.5 wt. % carbon, 0.5-15 wt. % chromium, 0-5 wt. % molybdenum, less than 2 wt. % manganese and less than 2 wt. % silicon, and wherein the proportion of the carbide-forming additives ~~such as V, Nb, Ti and W~~

~~compounds~~ in total is 3-20 wt.%, all based upon the weight of the ferrous metallic powder, and, ~~additionally, the powderized mixture contains (2)~~ not more than 50 wt. % of ceramic particulates, based upon the weight of the powderized wear-resistant hard material component (A), and an optional ~~in which the proportion of a~~ metallic binder is in an amount not greater than 30 wt. %, based upon the weight of the powderized wear-resistant hard material component (A), wherein the rest of the composition comprising impurities or trace amounts of different additives.

6. (Canceled)

7. (Canceled)

8. (Currently amended) The method of claim 2, wherein the wear-resistant hard material component (A) is a ferrous-based material having (Fe > 50 wt. %) or, alternatively, is a mixture of a ferrous-based material and a ceramic material (~~carbide, oxide, nitride, boride, etc.~~) containing not more than 30 wt. % of a metallic binder, whereby and wherein the hardness of the wear-resistant hard material component (A) is greater than HRC 35.

9. (Currently amended) The method of claim 3 ~~4~~, wherein ~~the wear-resistant component (A) is a ferrous material (Fe > 50 wt. %) or, alternatively, a mixture of a ferrous material and a ceramic material (carbide, oxide, nitride, boride, etc.) containing not more than 30 wt. % of a metallic binder, whereby the hardness of the~~ wear-resistant hard material component (A) is greater than HRC 50.

10. (Currently amended) The method of claim 8 2, wherein ~~the wear-resistant component (A) is a ferrous material (Fe > 50 wt. %) or, alternatively, a mixture of a ferrous material and a ceramic material (carbide, oxide, nitride, boride, etc.) containing not more than 30 wt. % of a metallic binder, whereby the hardness of the~~ wear-resistant hard material component (A) is greater than HRC 50.

11. (Currently amended) The method of claim 2, wherein ~~the tough material component (B) is a ferrous (Fe > 50 wt. %) or nickel (Ni > 50 wt. %) based material, whereby the hardness of the~~ tough material component (B) is not greater than HRC 35.

12. (Currently amended) The method of claim 11 2, wherein ~~the tough material component (B) is a ferrous (Fe > 50 wt. %) or nickel (Ni > 50 wt. %) based material, whereby the hardness of the~~ tough material component (B) is not greater than HRC 25.

13. (Currently amended) The method of claim 3, wherein ~~the tough material component (B) is a ferrous (Fe > 50 wt. %) or nickel (Ni > 50 wt. %) based material, whereby the hardness of the~~ tough material component (B) is not greater than HRC 35.

14. (Currently amended) The method of claim 13 3, wherein ~~the tough material component (B) is a ferrous (Fe > 50 wt. %) or nickel (Ni > 50 wt. %) based material,~~

whereby the hardness of the tough material material component (B) is not greater than HRC 25.

15. (Currently amended) The method of claim 2, wherein prior to said densifying, the wear-resistant hard material component (A) is ~~prepared from~~ in a powdered ~~raw material in which the chemical composition of the state, and comprises (1) a~~ ferrous metallic powder having a composition wherein $\{Fe > 50 \text{ wt. \%}\}$ ~~in the~~ powdered mixture is and containing 0.5-3.5 wt. % carbon, 0.5-15 wt. % chromium, 0-5 wt. % molybdenum, less than 2 wt. % manganese and less than 2 wt. % silicon, and wherein the proportion of the carbide-forming additives ~~such as V, Nb, Ti and W~~ compounds in total is 3-20 wt.%, all based upon the weight of the ferrous metallic powder and, ~~additionally, the powdered mixture contains (2) not more than~~ 50 wt. % of ceramic particulates, based upon the weight of the powdered wear-resistant hard material component (A), and an optional in which the proportion of a metallic binder is in an amount not greater than 30 wt. %, based upon the weight of the powdered wear-resistant hard material component (A), wherein the rest of the composition comprising impurities or trace amounts of different additives.

16. (Previously presented) The method of claim 3, wherein prior to said densifying, the wear-resistant hard material component (A) is ~~prepared from~~ in a powdered ~~raw material in which the chemical composition of the state, and comprises (1) a~~ ferrous metallic powder having a composition wherein $\{Fe > 50 \text{ wt. \%}\}$ ~~in the~~ powdered mixture is and containing 0.5-3.5 wt. % carbon, 0.5-15 wt. % chromium, 0-5 wt. % molybdenum, less than 2 wt. % manganese and less than 2 wt. % silicon,

and wherein the proportion of the carbide-forming additives ~~such as V, Nb, Ti and W~~ compounds in total is 3-20 wt.%, all based upon the weight of the ferrous metallic powder and, ~~additionally, the powderized mixture contains (2)~~ not more than 50 wt. % of ceramic particulates, based upon the weight of the powderized wear-resistant hard material component (A), and an optional in which the proportion of a metallic binder is in an amount not greater than 30 wt. %, based upon the weight of the powderized wear-resistant hard material component (A), wherein the rest of the composition comprising impurities or trace amounts of different additives.

17. (Previously presented) The method of claim 4, wherein prior to said densifying, the wear-resistant hard material component (A) is ~~prepared from in~~ a powderized raw material in which the chemical composition of the state, and comprises (1) a ferrous metallic powder having a composition wherein (Fe > 50 wt. %) in the powderized mixture is and containing 0.5-3.5 wt. % carbon, 0.5-15 wt. % chromium, 0-5 wt. % molybdenum, less than 2 wt. % manganese and less than 2 wt. % silicon, and wherein the proportion of the carbide-forming additives ~~such as V, Nb, Ti and W~~ compounds in total is 3-20 wt.%, all based upon the weight of the ferrous metallic powder and, ~~additionally, the powderized mixture contains (2)~~ not more than 50 wt. % of ceramic particulates, based upon the weight of the powderized wear-resistant hard material component (A), and an optional in which the proportion of a metallic binder is in an amount not greater than 30 wt. %, based upon the weight of the powderized wear-resistant hard material component (A), wherein the rest of the composition comprising impurities or trace amounts of different additives.

18. (Canceled)

19. (Canceled)

20. (Canceled)

21. (Canceled)

22. (New) The method of claim 3, wherein the ceramic material comprises a carbide, oxide, nitride, boride, or mixture thereof.

23. (New) The method of claim 1, wherein said hot working comprises one or more of hot rolling, radial forging, or open forging.

24. (New) The method of claim 1, wherein said forming and densifying comprises charging said tough material component (B) and said wear-resistant hard material component (A) into a mold to form a green body, and densifying the green body by hot isostatic pressing to form the substantially densified green body.

25. (New) The method of claim 1, wherein said forming and densifying comprises forming a network structure of tough material component (B) in a mold using hot isostatic pressing, and then filling voids with wear-resistant hard material component (A).

26. (New) The method of claim 1, further comprising post-processing the hot worked multimaterial part by one or more of machining or heat treating, to form a post-processed material.

27. (New) The method of claim 26, further comprising joining the post-processed material to a manufactured part by one or more of brazing, gluing, welding, or mechanical joining techniques.

28. (New) The method of claim 1, wherein tough material component (B) is predensified.

29. (New) The method of claim 4, wherein the hardness of the tough material component (B) is not greater than HRC 25.